

AMENDMENTS TO THE CLAIMS

1-10. (Canceled)

11. (Currently Amended) A method for preventing senility by constructing and applying a Noise-Vocoded Speech Sound signal comprising: produced by
dividing at least a portion of a speech signal into a prescribed frequency band signals; and
extracting envelopes of each of the prescribed frequency band signals;
subjecting each of the frequency band signals to noise degradation; and
summing up the outputs of the frequency band signals to form the Noise-Vocoded Speech
Sound signal;
outputting the Noise-Vocoded Speech Sound signal such that the Noise-Vocoded Speech
Sound signal activates various brain regions other than typically activated brain regions during aural
recognition.

12. (Currently Amended) A method for preventing senility by constructing and applying a Noise-Vocoded Speech Sound signal comprising steps of: produced by
~~dividing at least a portion of a speech signal into a plurality of frequency band signals and~~
extracting each of prescribed frequency band signals from a speech signal using a plurality
of first bandpass filters of a first bandpass filter section;
extracting each of envelopes of the frequency band signals using each of envelope extractors
of an envelope extraction section;
~~subjecting the frequency band signals to noise degradation; and~~
applying a noise source signal to a plurality of second bandpass filters of a second bandpass
filter section;
extracting noise signals corresponding to the plurality of prescribed frequency band signals;
multiplying each of outputs from the envelop extraction section and each of outputs from the
second bandpass filter section in a multiplication section;

summing up the outputs from the multiplication section in an addition section to form the Noise-Vocoded Speech Sound signal; and

outputting the Noise-Vocoded Speech Sound signal such that the Noise-Vocoded Speech Sound signal activates various brain regions other than typically activated brain regions during aural recognition.

13. (Canceled)

14. (Currently Amended) The method for preventing senility according to claim ~~13~~12, wherein at least one of the number of the first and second bandpass filters and the ~~boundary~~ prescribed frequency of ~~frequency bands of the~~ first and second bandpass filters can be modified at least according to a language.

15. (Currently Amended) The method for preventing senility according to claim ~~13~~12, wherein at least one of the number of the first and second bandpass filters and the ~~boundary~~ prescribed frequency of ~~frequency bands of the~~ first and second bandpass filters can be modified through automatic language recognition.

16. (Previously presented) The method for preventing senility according to claim 11 or 12, wherein only a speech component is extracted from the speech signal, and the Noise-Vocoded Speech Sound signal is produced from the extracted speech signal.

17. (Previously presented) The method for preventing senility according to claim 11 or 12, wherein an output signal of a microphone is the speech signal.

18. (Previously presented) The method for preventing senility according to claim 11 or 12, wherein the Noise-Vocoded Speech Sound signal is produced from a stored speech signal.

19. (Canceled)

20. (Currently Amended) The method for preventing senility according to ~~claims~~claim 11, or 12 and 19, further comprising:
an ~~output step of outputting the Noise-Vocoded Speech Sound signal to a user;~~
a ~~response input step of accepting a user's response;~~ and
a ~~correctness outputting step of outputting the correctness of the response.~~